

REMARKS

The present patent application is a continuation of the patent application having serial number 10/136,590, filed on May 3, 2002, and which is referred to as the "immediate parent" patent application. In the office action of October 7, 2003, the Examiner allowed claims 22-29, objected to claims 45, 47, 48, and 50 as containing allowable subject matter but that should be rewritten in independent form to be allowed, and rejected claims 1-21, 30-44, 46, 49, and 51-63. Applicant filed an office action response on January 7, 2004, which cancelled claims 1-21, 30-39, and 52-63; amended independent claim 40 to include all the limitations of objected-to claim 45 and its base claims; amended independent claim 46 to include all the limitations of objected-to claim 47 and its base claims; and, added claim 64 as a copy of independent claim 46 but that also included all the limitations of objected-to claim 50.

In the present preliminary amendment, Applicant argues that the rejected claims and some of the objected-to claims in the immediate parent patent application are allowable. Applicant has cancelled claims 22-29, since these claims were formally allowed in the immediate parent application. Applicant has cancelled claim 45, because claim 40 in the immediate parent application was amended to include all the limitations of objected-to claim 45 and its base claims, and was thereafter formally allowed. Similarly, Applicant has cancelled claim 47, because claim 46 in the immediate parent application was amended to include all the limitations of objected-to claim 47 and its base claims, and was thereafter formally allowed. Applicant has cancelled claim 48, because claim 48 in the immediate parent application depends from claim 46, and was formally allowed. Finally, Applicant has cancelled claim 50, because added claim 64 in the immediate parent application included all the limitations of objected-to claim 50 and its base claims, and was later formally allowed.

Applicant notes that the pending claims that remain after cancellation of claims 22-29, 45, 47-48, and 50 include the following independent claims: 1, 15, 30, 37, 40, 46, 52, 56, and 60. These independent claims were rejected in the office action of October 7, 2003, in the immediate parent patent application, as anticipated by Wichner (2002/0186349). Wichner is a published patent application published on December 12, 2002, and therefore has an effective date of December 12, 2002.

As has been noted, the present patent application is a continuation of the immediate parent patent application. The immediate parent patent application is a continuation-in-part of the patent application having serial number 09/587,446, filed on June 5, 2000, and which is referred to as the “original parent” patent application. The filing date of the original parent patent application is thus the effective date of the original parent patent application. A copy of the original patent application has been filed with this preliminary amendment in a Form PTO-1449 for convenience.

Applicant asserts that because the original parent patent application pre-dates Wichner, the independent claims 1, 15, 30, 37, 40, 46, 52, 56, and 60 of the present patent application are not properly rejected as being anticipated by Wichner. Wichner’s effective date is December 12, 2002, whereas the effective date of these independent claims is June 5, 2000, by virtue of their having support in the specification of the original parent patent application. Because the other remaining pending claims ultimately depend from one of these independent claims, they are also patentable, since they implicitly incorporate the limitations of their parent claims and thus cannot be anticipated by Wichner.

Applicant notes that “[w]here the effective filing date of applicant’s or parent owner’s parent application . . . is prior to the effective date of the reference, an affidavit or declaration under 37 CFR 1.131 is unnecessary because the reference is not used.” (MPEP 715(D)) Furthermore, “[u]nder 35 USC 120, a claim in a US application is entitled to the benefit of the filing date of an earlier filed US application if the subject matter of the claim is disclosed in the manner provided by 35 USC 112, first paragraph, in the earlier filed application.” (MPEP 201.11.I) “To satisfy the written description requirement [of 35 USC 112, first paragraph], a patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention.” (MPEP 2163.I) Claims “must be supported in the specification through express, implicit, or inherent disclosure.” (MPEP 2163.I.B)

Applicant asserts that independent claims 1, 15, 30, 37, 40, 46, 52, 56, and 60 of the present patent application have support in the specification of the original parent patent application in accordance with 35 USC 112, first paragraph. As such, because the effective

date of the original parent patent application is before the effective date of Wichner, rejection of these independent claims cannot be made on the basis of Wichner, as Wichner cannot be used. Applicant now explains how each of the independent claims of the present patent application has support in the specification of the original parent patent application.

Claim 1

Claim 1 is directed to a projector that has a “broad-spectrum light source having a broad spectrum,” and a “narrow-spectrum light source having a narrow spectrum complementing the broad spectrum of the broad-spectrum light source.” Support for this claim is found in the original parent patent application at least in the description of FIG. 1 thereof on page 3, lines 26-31, and in the description of FIG. 7 thereof on page 7, lines 1-5. These portions of the original parent patent application read as follows:

Point A 22 is an example of a “cool” white. Point B 24 is a point representing a nearly spectrally pure blue color. By mixing some of color B into the white A, different shades of white can be produced, all of which exist on the straight AB line 28. It is desirable for whites to fall near the Plankian locus 20 and it can be seen that mixing different amounts of color B with the cool white A results in a wide range of whites that fall on or near the Plankian locus 20.

...

[T]he single CCFL 56 is chosen to be either a “hot” or “cool” CCFL light source and the color of the second light source is chosen to be *complementary* in color such that a direct line between the two points representing the colors of the two light sources on a CIE 193 1 plot is disposed substantially near the Plankian locus as exemplary [sic] illustrated in Fig. 1 and Fig. 2.

Thus, the CCFL light source may produce the cool white color of Point A, and therefore supports a broad-spectrum light source having a broad spectrum, since the color white implicitly and inherently has a broad spectrum. Furthermore, the second light source may produce the nearly spectrally pure blue color of Point B, and thus supports a narrow-spectrum light source having a narrow spectrum, since a spectrally pure blue color implicitly and inherently has a narrow spectrum. The second light source is complementary in color to the CCFL light source, and therefore supports the narrow spectrum of the narrow-spectrum light source complementing the broad spectrum of the broad-spectrum light source.

Claim 15

Claim 15 is directed to a projector that has a “primary light means for providing light having a broad spectrum, the light being weak at a narrow part of the broad spectrum,” and a “compensatory light means for compensating the narrow part of the broad spectrum at which the light is weak.” Support for this claim is found in the original parent patent application at least in the description of FIG. 1 thereof on page 3, lines 26-31, and in the description of FIG. 5B thereof on page 5, line 30, through page 6, line 6. The former portion of the original parent patent application has already been excerpted above, and is not duplicated here. The latter portion of the original parent patent application reads as follows:

The sensor 72 is used to detect the intensity of backlight 56 and then adjust the output of the additional light source 58 to maintain a chosen white balance This feedback control maintains white balance when the backlight 56 output changes due to warm-up or aging effects. . . . [T]he output of sensor 72 can be used . . . to adjust the output of additional light source 58 relative to backlight 56 to *compensate* for changes in the ambient light color spectrum changes.

The backlight 56 thus has a white balance or color spectrum that changes and that may, for example, produce the cool white color of Point A (as previously described in relation to claim 1), such that it supports a primary light means that has a broad spectrum. The additional light source 58 is adjusted to maintain a chosen white balance as a *compensatory* measure and may, for example, produce the nearly spectrally blue color of Point B (as previously described in relation to claim 1), and therefore supports a compensatory light means. The nearly spectrally blue color of Point B that may be produced by the compensatory additional light source 58 is said to complement the cool white color of Point A (as previously described in relation to claim 1) that may be produced by the backlight 56, and therefore supports the compensatory light means compensating the narrow part of the broad spectrum at which the broad spectrum is weak. As can be appreciated by those of ordinary skill within the art, the reason for having a *compensatory* light source, like the additional light source 58, as described in the original parent application, is to compensate for weak or narrow spectral parts of the primary backlight 56, to maintain white balance.

Claim 30

Claim 30 is directed to a projection system having a “reflector,” a “primary light source positioned within the reflector and outputting light with a broad spectrum,” and a “secondary light source positioned outside the reflector and outputting light with a narrow spectrum and optically routed for combination with the light output by the primary light source.” Applicant notes that support within the original parent patent application for a primary light source outputting light with a broad spectrum, and for a secondary light source outputting light with a narrow spectrum, has already been discussed in relation to claim 1. Furthermore, support for a reflector in which the primary light source is positioned therein, where the secondary light source is positioned outside of the reflector and its light is optically routed for combination with the light from the primary light source, is found in the original parent patent application at least in the description of FIG. 8 thereof on page 7, lines 7-12, which reads as follows:

[A] single CCFL 56 is positioned to radiate light directly and indirectly using small reflector 84 onto a first optical path, light pipe 90. . . . A second light source 98 . . . is used to direct light onto a second optical path, a light pipe 94, that directs light onto the light pipe 90, which mixes light from CCFL 56 with second light source 98.

The reflector 84 has a single CCFL 56 positioned therein (see FIG. 7 of the original parent patent application), and the second light source 98 is positioned outside the reflector 84 (again, see FIG. 7 of the original parent patent application), thereby providing support for a reflector, a primary light source positioned within the reflector, and a secondary light source positioned outside the reflector. Furthermore, the light pipe 94 optically routes the light from the second light source 98, directing it onto the light pipe 90, which mixes the light from the second light source 98 with the light from the CCFL 56, and thereby provides support for the secondary light being optically routed for combination with the primary light.

Claim 37

Claim 37 is directed to a projection system that has “means for emitting first light having a broad spectrum” and “means for emitting second light having a narrow spectrum complementing the broad spectrum of the first light.” Support for claim 37 is found in the original parent patent application consistent with support found in the original parent patent application for claim 1. Applicant therefore directs the Examiner to the discussion of support for claim 1, above, and does not duplicate this discussion here to avoid redundancy.

Claim 40

Claim 40 is directed to a method in which light is provided “by a broad-spectrum light source having a broad spectrum,” light is provided “by a narrow-spectrum light source having a narrow spectrum complementing the broad spectrum of the broad-spectrum light source,” and “the light provided by the broad-spectrum light source” is combined with “the light provided by the narrow-spectrum light source.” Support for providing a broad-spectrum light source having a broad spectrum and a narrow-spectrum light source having a narrow spectrum complementing the broad spectrum of the broad-spectrum light source is found in the original parent patent application consistent with support found in the original parent patent application for claim 1. Furthermore, support for combining the light from these two light sources is found in the original parent patent application consistent with support found in the original parent patent application for claim 30. Therefore, Applicant directs the Examiner to the discussions of support for claims 1 and 30, above, and does not duplicate them here to avoid redundancy.

Claim 46

Claim 46 is directed to a method in which light is provided “by a primary light source having a broad spectrum,” light is provided by “a secondary light source having a narrow spectrum complementing the broad spectrum of the primary light source,” and “the secondary light source” is positioned “relative to the primary light source so that light provided by the primary light source is combined with light provided by the secondary light source.” Support

for providing a primary light source having a broad spectrum and a secondary light source having a narrow spectrum complementing the broad spectrum of the primary light source is found in the original parent patent application consistent with support found in the original parent patent application for claim 1. Furthermore, support for positioning the secondary light source relative to the primary light source so that the light from these two light sources is combined is found in the original parent patent application consistent with support found in the original parent patent application for claim 30. Therefore, Applicant directs the Examiner to the discussions of support for claims 1 and 30, above, and does not duplicate them here to avoid redundancy.

Claim 52

Claim 52 is directed to a projection system having a “light source of a first type” and a “light source of a second type” in which “a spectrum of the light source of the second type complement[s] a spectrum of the light source of the first type.” Support for claim 52 is found in the original parent patent application consistent with support found in the original parent patent application for claim 1. Applicant therefore directs the Examiner to the discussion of support for claim 1, above, and does not duplicate this discussion here to avoid redundancy.

Claim 56

Claim 56 is directed to a “narrow-spectrum light source for use in a projection system having a primary broad-spectrum light source, the narrow-spectrum light source having a narrow spectrum complementing a broad spectrum of the broad-spectrum light source.” Support for claim 56 is found in the original parent patent application consistent with support found in the original parent patent application for claim 1. Applicant therefore directs the Examiner to the discussion of support for claim 1, above, and does not duplicate this discussion here to avoid redundancy.

Claim 60

Claim 60 is directed to a "broad-spectrum light source for use in a projection system having a narrow-spectrum light source, the broad-spectrum light source having a broad spectrum, the narrow-spectrum light source having a narrow spectrum complementing the broad spectrum of the broad-spectrum light source." Support for claim 60 is found in the original parent patent application consistent with support found in the original parent patent application for claim 1. Applicant therefore directs the Examiner to the discussion of support for claim 1, above, and does not duplicate this discussion here to avoid redundancy.

Conclusion

Applicants have made a diligent effort to place the pending claims in condition for allowance, and request that they so be allowed. However, should there remain unresolved issues that require adverse action, it is respectfully requested that the Examiner telephone Mike Dryja, Applicants' Attorney, at 425-427-5094, so that such issues may be resolved as expeditiously as possible. For these reasons, and in view of the above amendments, this application is now considered to be in condition for allowance and such action is earnestly solicited.

Respectfully Submitted,



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